

As the number of streams on which streamflow information is likely to be desired far exceeds the number of continuous-record stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than continuous-record stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or flood-flow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to these events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in three tables. The first is a table of annual maximum stage and discharge at crest-stage stations, the second is a table of discharge measurements at low-flow partial-record stations, and the third is a table of discharge measurements at miscellaneous sites.

Crest-Stage Partial-Record Stations

Prior to 1973, crest-stage partial-record station records for the State of Hawaii were published in an annual progress report entitled "An Investigation of Floods in Hawaii." The following table contains annual maximum discharge for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain, but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained for purposes of establishing the stage-discharge relation, but these are not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Click on a station number for site description.

Annual maximum gage height and discharge at crest-stage partial-record stations during water year 2004

Station name and number	Location	Drainage area (mi ²)	Period of record	Water year 2004 maximum		Period of record maximum		
				Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)
Island of Kauai--Continued								
16073500	Lat 22° 04'01", long 159° 20'21", at Konohiki Str nr culvert on private road, 1.8 mi	3.38	1964-67, 1970-2004r	02-27-04	5.38	74	12-14-91	16.92
Kapaa	upstream from mouth, and 2.4 mi southwest of Kapaa High School.							2,530
16081200	Lat 22° 06'25", long 159° 22'07", at Akulikuli Str nr Kahuna Road crossing, 800 ft	0.40	1964-2004r	11-30-03	4.48	207	12-14-91	11.40
Kapaa	upstream from mouth, and 3.5 mi northwest of Kapaa armory.							1,550
16084500	Lat 22° 06'28", long 159° 19'52", at Kapaa Str at old highway crossing nr abutment of old highway bridge, 100 ft upstream from road crossing, 1.4	14.0	1962-2004	02-27-04	10.30	3,710	12-14-91	23.11
Kealia	mi northwest of Kealia, and 2.1 mi upstream from mouth.							30,300
16097900	Lat 22° 13'02", long 159° 25'18", at Puukumu Str nr culvert on Highway 56, 0.8 mi	0.91	1964-68, 1971-2004	04-20-04	4.36	126	04-07-71	17.27
Kilauea	northwest of Kilauea School, and 0.9 mi upstream from mouth.							1,430
16104200	Lat 22° 12'50", long 159° 28'43", at Hanalei Riv at Highway 56 bridge nr Hanalei highway bridge, 1.6 mi northeast of Hanalei, and 2.4 mi upstream from mouth.	21.0	1963-2004b,r	02-27-04	8.43	-	11-03-95	13.82
16130000	Lat 22° 02'41", long 159° 45'17", on Nahomalu Valley nr left bank 1.1 mi northeast of Mana, Mana and 5.3 mi northwest of Kekaha School.	3.81	1962-63, 1964-71#, 1972-2004	02-27-04	4.70	266	04-15-72	7.15
								2,120

Operated as a continuous-record gaging station

b Gage height only

r Revised

16052000 peak gage height and discharge published for water years 1963-92 were revised in water-resources data report for Hawaii, water year 1993.

16073500 peak gage height and discharge published for water year 1993 were revised in water-resources data report for Hawaii, water year 1999.

16081200 peak gage heights and discharges published for water years 1993-98 were revised in water-resources data report for Hawaii, water year 1999.

16104200 peak gage height published for water years 1983-92 were revised in water-resources data report for Hawaii, water year 1993.

Station name and number	Location	Drainage area (mi ²)	Period of record	Water year 2004 maximum			Period of record maximum		
				Date	Gage height (ft)	Discharge (ft)	Date	Gage height(ft)	Discharge (ft)
Island of Oahu--Continued									
16228200	Lat 21°22'37", long 157°53'03", on right bank 1.1 mi northeast of Tripler Aiea	3.34	1969-2004	11-29-03	5 5	5.68 5	1,740	3-18-80	9.97 4,860
Moanalua Stream nr blw Reservoir 2 wasteway nr Honolulu	Hospital and 2.9 mi east of Aiea sugar refinery.								
16232000	Lat 21° 20'57", long 157° 49'40", on right bank beside Old Pali Road in upper Nuuanu Valley, 0.2 mi downstream from reservoir 2 wasteway, and 3.5 mi northeast of Honolulu Post Office.	3.35	1913-96, 2002-2004r	11-29-03		5.92	588	01-16-21	a8.74 6,990
16235400	Lat 21° 20'00", long 157° 51'04" at Wyllie Street Bridge and 1.8 mi NE of Honolulu Post Office.	1.29	1958-2004r	12-07-03	4.84	unknown	05-14-63	6.14	2,510
Pauoa Str at Honolulu	Lat 21° 19'18", long 157° 51'03", at Lusitana Street bridge and 1.1 mi northeast of Honolulu Post Office.	1.43	1958-2004	02-27-04	0.65	unknown	05-14-63	4.65	2,200
16247130	Lat 21°17'16", long 157° 49'51", at Ala Wai Canal, 300 ft south of Ala Wai Elem. School, 30 ft south of the School, Oahu	11.7	2004b	06-03-04	280	-	06-14-03	2.82	-
Ala Wai Canal at Ala Moana Blvd. Bridge, Oahu	Lat 21° 17'29", long 157° 50'35", on right bank, at downstream end of Ala Moana Blvd. Bridge, 0.9 mi NW of Ala Wai Elem. School.	16.0	2004b	06-03-04	3.14	-	06-03-04	3.14	-
16248950	Lat 21° 21'04", long 157° 43'33", on left bank 30 ft downstream from Kalanianaole Highway bridge, 1.9 mi northwest of Waimanalo Post Office, and 0.75 mi southwest of Bellows Air Force Station radio towers.	1.18	1998-2004	01-02-04	9.11	unknown	01-02-04	9.11	unknown
Kaelepulu Str tributary at Kailua	Lat 21° 21'44", long 157° 44'22", 30 ft upstream from Kalanianaole Highway, 1.6 mi northwest of Waimanalo School, and 2.4 mi south of Kailua Post Office.	0.16	1963-2004	02-27-04	3.17	113	12-31-87	7.53	467
16249195	Lat 21° 22'55", long 157° 43'45", at bridge on Keolu Drive, 0.2 mi south of St. John Vianney School and 1.2 mi east of Kailua High School.	2.73	2002-2004b	02-27-04	10.09	-	02-27-04	10.09	-

Station name and number	Location	Drainage area (mi ²)	Period of record	Water year 2004 maximum			Period of record maximum		
				Date	Gage height (ft)	Discharge (ft)	Date	Gage height (ft)	Discharge (ft)
Island of Oahu--Continued									
16264600	Lat 21° 23'53", long 157° 45'07", at Kawainui Marsh nr	11.0	2002-2004b,r	02-27-04	6.11	-	02-27-04	6.11	-
Levee Station 15+00	Kawainui Marsh, 0.6 mi west of Levee Station 15+00								
16265000	Lat 21° 24'32", long 157° 47'36", 50 ft upstream from bridge on Kaneohe Bay Drive at Kaneohe, 0.2 mi northeast of Castle High School, and 0.6 mi upstream from mouth.	1.19	1965, 1968-74, 1977-2004	11-29-03	7.45	975	02-01-69	17.90	5,290
16274499	Lat 21° 25'12", long 157° 48'15", 35 ft upstream from bridge on Kamehameha Highway, at Kaneohe.	0.62	1959-2004r	11-27-04	3.81	533	05-02-65	a11.50	2,750
16283480	Lat 21° 27'04", long 157° 50'13", at bridge on Ahuimanu Road and 0.8 mi south of Kahaluu.	2.31	1963-2004	11-29-03	6.05	940	02-01-69	a11.80	7,300
16308500	Lat 21° 39'25", long 157° 55'57", 800 ft northeast of Zion Cemetery on upstream side of bridge at Kamehameha Highway.	4.79	1997-2004b	11-29-03	5.15	-	01-29-02	5.55	-
16310501	Lat 21° 39'47", long 157° 57'11", at Malaekahana Str at altitude 30 ft, nr Kahuku	4.05	1958-2004	05-11-04	12.78	743	04-15-63	a12.10	4,640
	abandoned plantation railroad bridge, 1.1 mi southwest of junction of plantation road and Highway 83, and 1.2 mi south of Kahuku Hospital.						05-06-02	c13.04	-
16311000	Lat 21° 42'02", long 157° 59'43", on left bank of stream 30 ft upstream of Highway 83 and 3.0 mi northwest of Kahuku Hospital.	2.27	1958-2004	05-11-04	8.13	461	05-02-65	a8.13	1,390
							11-14-96	a8.63	-

Station name and number	Location	Drainage area (mi ²)	Period of record	Water year 2004 maximum			Period of record maximum Date	Gage height (ft)	Discharge (ft)
				Date	Gage height (ft)	Discharge (ft)			
Island of Oahu--Continued									
16317800	Lat 21° 40'59", long 158° 02'12", on	1.98	1973-2004	11-29-03	4.56	unknown	11-27-01	5.91	663
Kaunala Gulch nr	downstream left bank wingwall of						02-14-03	6.36	-
Sunset Beach	road bridge on Highway 83 near								
	Sunset Beach and 2.9 mi northeast								
	of Waimea.								
16318000	Lat 21° 40'19", long 158° 02'28", 0.4	2.59	1968-2004	05-11-04	4.19	303	04-19-74	4.97	982
Paumalu Gulch at	mi upstream from Highway 83 at						04-04-89	6.44	-
Sunset Beach	Sunset Beach and 2.2 mi northeast								
	of Waimea.								
16331000	Lat 21° 37'29", long 158° 04'58", at	2.23	1968-2004	11-29-03	1.04	<21	03-18-80	11.2	2,030
Waimea Gulch nr	culvert on Ashley Road, 0.1 mi								
Kawaiola Camp	upstream from Highway 83, and 1.1								
	mi north of Kawaiola Camp.								
16340000	Lat 21° 35'28", long 158° 04'45", 1.7	13.5	1958-2004	11-29-03	7.56	2,890	04-19-74	15.80	15,900
Anahulu River nr	mi southeast of junction of Emerson								
Hale'iwa	Road and Kamehameha Highway								
	and 2.5 mi east of Waialua School at								
	Hale'iwa.								
16350000	Lat 21° 35'09", long 158° 06'01", 0.6	5.96	1956-2004	11-29-03	13.32	1,580	04-19-74	20.7	7,600
Opaeula Str nr	mi upstream from Kamehameha								
Haleiwa	Highway and 2.1 mi northeast of								
	Waialua.								

< Actual value is known to be less than the value shown

Operated as a continuous-record gaging station

a At old gage datum

b Gage height

c At new gage datum

e Estimated

r Revised

16232000 peak discharge for water year 2002 was revised in water resources data report for Hawaii, water year 2003.

16235400 peak discharge for period of record published for water year 1992-2002 revised in water resources data report for Hawaii, water year 2003.

16249000 peak discharge for water year 1994 was revised in water resources data report for Hawaii, water year 2003.

16264600 peak gage height for water year 2002 was revised in water resources data report for Hawaii, water year 2003.

16274499 peak gage height for water year 2002 was revised in water resources data report for Hawaii, water year 2003

Station name and number	Location	Drainage area (mi ²)	Period of record	Water year 2004 maximum			Period of record maximum		
				Date	Gage height (ft)	Discharge (ft)	Date	Gage height (ft)	Discharge (ft)
Island of Molokai									
16411300	Lat 21° 08'49", long 157° 11'36", at Highway 46, 1.6 mi northeast of Highway 46 nr Mauna Loa	0.55	1964-85, 2003-04	01-02-04	<3.23	unknown	04-13-65	3.06	a 80
16411640	Lat 21° 05'53", long 157° 13'47", 2.7 Halena Gulch nr Mauna Loa	2.07	1965-2004	01-02-04	4.06	802	01-11-74	8.20	2,920
16411800	Lat 21° 09'55", long 157° 04'22", 0.4 Kaluapeelua Gulch at Ho'olehua	1.46	1964-2004	01-02-04	<0.66	<8.40	12-08-73	3.30	86
16413500	Lat 21° 07'42", long 157° 03'25", at Manawainui Gulch nr Kualapuu	10.4	1965-87, 2000-2004r	01-02-04	9.18	unknown	04-04-89	-	a 3,620
16415400	Lat 21° 03'25", long 156° 52'20", at Wawaia Gulch at Kamalo	2.12	1964-2004	01-01-04	1.68	615	04-13-65	2.61	1,250
16415600	Lat 21° 04'22", long 156° 57'03", on Kawela Gulch nr Moku	5.30	2002-2004	01-24-04	5.16	2,090	11-27-01	6.76	3,190
16419000	Lat 21° 07'59", long 156° 44'15", at Pohakupili Gulch nr Halawa	0.48	1964-2004	01-01-04	unknown	unknown	11-04-66	8.93	989

< Actual value is known to be less than the value shown

a At old gage datum.

r Revised

16413500 peak discharge published for water year 1988 and 1990-97 were revised in water-resources data report for Hawaii, water year 2001.

Station name and number	Location	Drainage area (mi ²)	Period of record	Water year 2004 maximum			Period of record maximum		
				Date	Gage height (ft)	Discharge (ft)	Date	Gage height (ft)	Discharge (ft)
Island of Maui									
16500100 Kepuni Gulch nr Kahikinui House	Lat 20°31'21", long 156°15'16", on right bank 120 ft upstream from bridge on Highway 31, 400 ft upstream from Kamole Gulch, 1.1 mi east of Kahikinui House, and 8.1 mi west of Kaupo	1.91	1963-72#, 1973-2004	2-27-04	6.27	325	9-18-94	13.68	2,320
16500300 Hawelewеле Gulch nr Kaupo	Lat 20°38'01", long 156°11'08", 700 ft upstream from Piilani Highway 31 and 3.9 mi west of Kaupo	11.3	1967-2004	3-22-04	9.27	3,350	1-08-80	15.10	13,600
16500800 Kukuiula Gulch nr Kaupo	Lat 20°39'18", long 156°04'44", at Highway 31, 1.3 mi west of Kipahulu, and 3.2 mi east of Kaupo	0.76	1963-68#, 1969-2004	11-28-03	5.29	unknown	03-31-82	13.76	5,950
16502400 Pukuilua Gulch nr Hana	Lat 20°42'00", long 156°00'14", at Highway 31, 0.4 mi southwest of Puuiki and 4.0 mi south of Hana	0.48	1963-2004	03-22-04	4.86	278	01-23-65	9.30	788
16502800 Moomoonui Gulch nr Hana	Lat 20°44'37", long 155°59'18", at Highway 31 just downstream from Moomooiki Gulch and 1.0 mi south of Hana.	0.90	1963-2004	03-22-04	4.05	unknown	10-29-00	15.64	2,950
16502900 Kawaipapa Gulch at Hana	Lat 20°46'08", long 156°00'04", 1,000 ft. upstream from Highway 36 and 0.3 mi northwest of Hana Hospital.	5.83	1965-2004	03-22-04	11.65	unknown	10-29-00	14.53	e22,200
16603700 Kalialinui Gulch tributary nr Pukalani	Lat 20°49'02", long 156°19'44", at Lower Kula Road and 1.4 mi south of Pukalani.	1.17	1967-2004	01-23-04	3.42	unknown	01-09-80	7.35	414
16603800 Kaluapulani Gulch tributary nr Pukalani	Lat 20°48'52", long 156°18'32", at Haleakala Highway, 1.5 mi west of Olinda Prison Camp and 2.3 mi southeast of Pukalani.	0.45	1963-2004	01-23-04	2.23	53	07-23-64	9.90	306
16603850 Kalialinui Gulch nr Kahului	Lat 20°52'49", long 156°26'05", 600 ft upstream from Hansen Road, 0.5 mi northeast of Puunene Hospital and 2.5 mi southeast of Kahului Post Office.	17.9	1967-2004	12-05-03	5.56	unknown	01-28-71	8.33	1,330
16607000 Iao Str at Wailuku	Lat 20°53'38", long 156°30'27", 560 ft upstream from Market Street bridge at Wailuku and 1.9 mi upstream from mouth.	8.24	1951#, 1952- 2004	02-27-04	5.74	4,660	12-03-50	6.21	7,540

Station name and number	Location	Drainage area (mi ²)	Period of record	Water year 2004 maximum			Period of record maximum		
				Date	Gage height (ft)	Discharge (ft)	Date	Gage height (ft)	Discharge (ft)
Island of Maui--Continued									
16658500	Lat 20°44'56", long 156°19'22", at	0.98	1964-2004	02-27-04	5.23	199	01-28-71	8.23	409
Waiakoa Gulch tributary nr	Upper Kula Road, 1.0 mi southeast of Waiakoa, and 1.0 mi northeast of								
Waiakoa	junction of Lower and Upper Kula Roads								
16659000	Lat 20°47'15", long 156°27'42", 0.3	10.1	1963-2004	02-27-04	7.87	unknown	01-28-71	9.66	1,560
Waiakoa Gulch at Kihei	mi northeast of Kihei and 0.4 mi upstream from mouth.								
16660000	Lat 20°46'06", long 156°27'03", on	14.4	1963-70#, 1971-2004	01-23-04	3.40	1,380	01-28-71	9.40	4,460
Kulanihakoi Gulch nr Kihei	right bank 0.5 mi northeast of Lihue Cemetery, 0.8 mi upstream from mouth, and 1.3 mi southeast of Kihei.								

< Actual value is known to be less than the value shown

Operated as a continuous-record gaging station

e Estimated

r Revised

a At old gage datum

16619700 peak gage height and discharge published for water year 1999 were revised in water-resources data report for Hawaii, water year 2000.

16630200 peak gage height and discharge published for water years 1997 were revised in water-resources data report for Hawaii, water year 2000.

Station name and number	Location	Drainage area (mi ²)	Period of record	Water year 2004 maximum			Period of record maximum		
				Date	Gage height (ft)	Discharge	Date	Gage height (ft)	Discharge
Island of Hawaii									
16701400	Lat 19° 40'56", long 155° 04'04", 160 ft. upstream of Olu Street and 3.6 mi. southeast of Hilo Post Office.	5.06	1965-71, 1979-80, 1994, 2002-04r	01-25-04	4.51	unknown	11-02-00	unknown	1,580
16701600	Lat 19° 43'10", long 155° 05'27", 0.65 mi south of Hilo Post Office, 0.65 mi west of Kapiolani School, and 0.1 mi upstream from Kapiolani Street bridge.	8.62	1997-2004	03-14-04	unknown	unknown	11-02-00	13.12	6,300
16717400	Lat 19° 48'07", long 155° 06'03", on upstream side of Hwy 19, 1.0 mi north of Papaikou, 5.1 mi north of Hilo Post Office.	0.24	1963-67, 1973-76, 1978-79, 1985, 2002-04r	03-14-04	5.51	109	02-20-79	20.60	400
16717600	Lat 19° 50'38", long 155° 06'21", on upstream right bank wingwall of culvert on Highway 19 at Pepeekeo 2.0 mi south of Honomu, and 8.0 mi north of Hilo.	0.58	1962-72, 1979, 1986, 1994-2004r	03-14-04	9.53	359	02-20-79	17.1	2,850
16717650	Lat 19° 51'52", long 155° 06'11", at culvert on Highway 19, 1.0 mi southeast of Honomu, 2.2 mi north of Pepeekeo, and 9.4 mi north of Hilo.	1.09	1963-68, 1975, 1979, 1985-86, 1994-2004r	03-14-04	9.84	1030	02-20-79	29.93	3,320
16717850	Lat 20° 01'08", long 155° 18'45", at culvert on Highway 19, 1.7 mi west of Ookala, and 4.1 mi southeast of Paauilo.	0.62	1963-91, 1993-2004				Records being reviewed.		
16717920	Lat 20° 05'12", long 155° 29'17", at Highway 24, 1.1 mi northwest of Honokaa Hospital, and 1.5 mi upstream from mouth.	0.62	1963-90, 1995-2004				Records being reviewed.		
16752600	Lat 20° 14'00", long 155° 48'00", at Hapahapai Gulch at Highway 27, 300 ft east of Kapaaau Post Office.	1.52	1963-90, 1995-2004	03-23-04	10.42	673	Previous records being reviewed.		

Station name and number	Location	Drainage area (mi ²)	Period of record	Water year 2004 maximum			Period of record maximum		
				Date	Gage height (ft)	Discharge (ft)	Date	Gage height (ft)	Discharge (ft)
Island of Hawaii--Continued									
16755800	Lat 20° 03'11", long 155° 44'35", on culvert 5.1 mi northwest of Waimea Waimea	0.32	1963-90, 1995-2004					Records being reviewed.	
16756500	Lat 20° 01'48", long 155° 42'05", on left bank 150 ft upstream from nr Kamuela Highway 25 at Waiaka and 2.0 mi west of Kamuela.	4.3	1964-72#, 1973-2004r	03-14-04	8.60	2,070	04-20-68	10.02	3,540
16759040	Lat 20° 02'16", long 155° 38'08", at Paiakuli Reservoir Highway 19, 2.1 mi west of tributary nr Waimea Puukapu Reservoir, and 2.6 mi northeast of Waimea.	0.27	1963-70, 1994-2004r	03-14-04	8.65	856	03-14-04	8.65	856
16759060	Lat 19° 57'32", long 155° 41'02", at Kamakoa Gulch nr bridge, 1.4 mi north of Saddle Road Waimea Junction, and 4.5 mi south of Waimea.	50.6	1963-68, 1972-74, 1979, 1982-83, 1994-2004r	03-14-04	3.69	237	01-16-63	4.35	1,290
16759600	Lat 19° 38'03", long 155° 57'00", on Waiaha Stream at right bank, 3 mi southeast of Holualoa intersection of Hwy 19 and 190 and 1.7 mi north of intersection of Hwy 180 and Halualoa Road.	9.61	2002-2004	04-21-04	5.31	1,820	04-21-04	5.31	1,820

Operated as a continuous-record gaging station
-- f 16759040 probable backwater from debris in culvert entrance
-- r Revised

16701300 peak gage height and discharge published for water years 1976-78, 1980-90 were revised in water resources data report for Hawai'i, water year 1999; peak gage height and discharge published for water years 1991 and 1993 were revised in water-resources data report for Hawai'i, water year 2001.
 16701300 peak gage height and discharge published for water years 1976-78, 1980-90 were revised in water-resources data report for Hawai'i, water year 1999; peak gage height and discharge published for water years 1991 and 1993 were revised in water-resources data report for Hawai'i, water year 2001.
 16717400 peak gage height and discharge published for water years 1968-72, 1977, 1979-84, 1986-90 were revised in water-resources data report for Hawai'i, water year 1999.
 16717600 peak gage height and dishcharge published for water years 1973-78, 1980-90, 1995-97 were revised in water-resources data report for Hawai'i, water year 1998.
 16717650 peak gage height and dishcharge published for water years 1966, 1969-74, 1976-78, 1980-84, 1987-90, 1996, 1999-2000 were revised in water-resources data report for Hawai'i, water year 2001.
 16756500 peak gage height and discharge published for water years 1964, 1975, 1978, 1991-96 were revised in water-resources data report for Hawai'i, water year 1998.
 16759040 peak gage height and discharge published for water years 1966, 1971-90, 1994-98 were revised in water-resources data report for Hawaii, water year 1999.
 16759060 peak gage height and discharge published for water years 1967, 1969-71, 1973, 1975-79, 1981, 1984-90, 1994-2002 were revised in water-resources data report for Hawai'i, water year 2003

Low-Flow Partial-Record Stations

Measurements of streamflow made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where long-term continuous records are available, will give a picture of the low-flow potential of the stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or nearly the same, site.

Discharge measurements made at low-flow partial-record stations during water year 2004

Station name and number	Location	Drainage area (mi ²)	Measurement		
			Period of record	Date	Gage height (ft) Discharge (ft ³ /s)
Island of Maui					
16588000	Lat 20° 53'20", long 156° 15'19", on right bank unknown	1924-87#, 1988-2004	10-07-03	2.22	68.1
Wailoa ditch at Honopou, near Huelo	100 ft downstream from intake at Honopou Stream, 0.5 mi west of Lupi, and 2.2 mi southwest of Huelo.		10-23-03	2.24	70.1
			10-23-03	2.54	84.2
			02-23-04	2.54	83.7
			05-24-04	2.61	89.8
			07-01-04	3.67	138.0
			07-01-04	3.83	150.0
16589000	Lat 20° 53'28", long 156° 15'22", on right bank unknown	1919-85#, 1986-2004	10-07-03	0.82	0.63
New Hamakua ditch at Honopou, near Huelo	bank 15 ft upstream from tunnel portal, 600 ft downstream from Honopou Stream crossing and 2.1 mi southwest of Huelo.		02-23-04	0.94	1.54
			05-24-04	1.03	2.35
			07-01-04	0.99	2.06
16592000	Lat 20° 54'57", long 156° 15'08", on left bank unknown	1911-26#, 1931-85#, 1986-2004	10-07-03	2.36	5.81
Lowrie ditch at Honopou Gulch, near Huelo	0.2 mi downstream from siphon across Honopou Stream, 1.6 mi west of Huelo, and 2.7 mi northwest of Kailua.		02-23-04	2.80	21.1
			05-24-04	2.75	18.6
			07-01-04	2.71	17.6
16594000	Lat 20° 55'07", long 156° 14'58", on right bank unknown	1911#, 1914#, 1916-28#, 1931-85#, 1986-2004	10-07-03	0.24	0.61
Ha'iku ditch at Honopou Gulch, near Kailua	on west side of Honopou Gulch, 160 ft below Hana Highway, 2.5 mi northwest of Kailua, and 5.0 mi east of Ha'iku.		02-23-04	0.44	2.25
			05-24-04	0.57	3.83
			07-01-04	0.44	2.23

Operated as a continuous-record gaging station.

Miscellaneous discharge water-quality measurements at low-flow stations during water year 2004, Molokai Springs.

Station name and number	Location	Time	Date	Discharge (ft ³ /s)	Water temperature C°	Specific conductance (μS/cm)
Island of Molokai						
210545157022201	Lat 21° 05'45", long 157° 02'22", at Kapuaiwa	1637	12-15-03	2.65	23.9	3,660
Coconut Grove	Coconut Grove, 1.3 mi west of Kaunakakai	1053	02-19-04	2.57	24.0	4,280
Springs near on Hwy 460		0920	05-19-04	3.25	23.9	3,700
Kaunakakai		0820	07-16-04	3.53	24.0	3,950
210432156484801	Lat 21° 04'32", long 156° 48'48", at Pukoo, 15 mi east of Kaunakakai on Hwy 450, 300 ft towards ocean from Hwy	1245	12-15-03	0.46	24.9	579
Pukoo Spring at Pukoo		1036	02-17-04	0.67	26.4	596
		0947	05-18-04	0.60	24.3	614
		0955	07-16-04	0.63	24.8	569

Discharge at Partial Record Stations on Stream Tributaries to Kealia Pond, Maui during water year 2004.

Miscellaneous discharge measurements during water year 2004.

Station name and number	Location	Date	Gage height (ft)	Discharge (ft ³ /s)
Island of Maui				
204839156295901	Lat 20° 48'39", long 156° 29'59"	02-27-04	13.11	700
Pohakea Stream at Upper Maalaea Rd. near Maalaea				
204858156293101	Lat 20° 48'58", long 156° 29'31"	02-27-04	11.08	772
Paleaahu Stream at alt. 100 ft near Maalaea				

Discharge measurements in the following table were made at miscellaneous sites on the south-southwestern side of the Island of Maui during water years 2002, 2003 and 2004.

Site number and name	Location	Date	Gage Height (ft)	Discharge (ft ³ /sec)
204853156302501	Lat 20° 48'53", long 156° 30'25"	09-03-03	2.36	1.73
Pohakea Stream at Hwy. 30		11-21-03	2.72	3.76
nr. Maalaea		02-27-04		3.80
204818156294001	Lat 20° 48'18", long 156° 29'40"	09-03-03		1.32
Pohakea Stream at Lower Maalaea Rd. nr. Maalaea.				
204808156293101	Lat 20° 48'08", long 156° 29'31"	09-03-03		0.96
Pohakea Stream at alt. 10 ft nr. Maalaea.				
204858156293101	Lat 20° 48'58", long 156° 29'31"	01-23-04		3.25
Paleaahu Stream at alt. 100 ft nr. Maalaea.				
204831156291301	Lat 20° 48'31", long 156° 29'31"	01-23-04		3.12
Paleaahu Stream at Lower Maalaea Rd. nr. Maalaea.				
204805156290601	Lat 20° 48'05", long 156° 29'06"	01-23-04		2.81
Paleaahu Stream at alt. 10 ft nr. Maalaea.				
16650200	Lat 20° 51' 20", long 156° 30'08"	11-28-01	4.45	48.6
Waikapu Stream at Waikapu.		11-28-01	4.42	42.4
		03-18-04	4.00	16.3
204850156284901	Lat 20° 48' 50", long 156° 28'49"	03-18-04		7.10
Waikapu Stream at Lower Maalaea Rd nr. Maalaea				
204827156283601	Lat 20° 48'27", long 156° 28'36"	03-18-04		5.74
Waikapu Stream at alt. 30 ft nr. Kihei.				

PEARL HARBOR SPRINGS MEASURING SITES

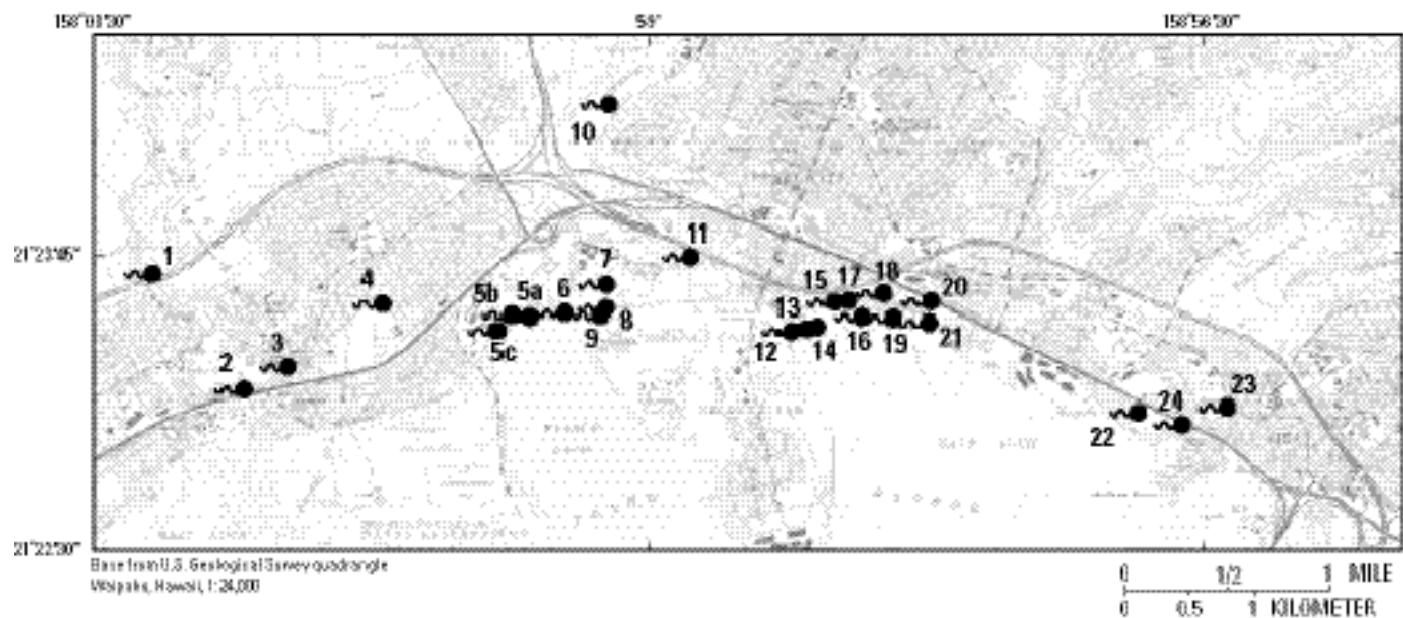


Figure 15. Map showing locations of Pearl Harbor Springs measuring sites, O'ahu.

Discharge and water-quality measurements at low-flow stations during water year 2004, Pearl Harbor Springs, O'ahu

Map number (see figure 15)	Station number and name	Location	Measurement					
			Time	Date	Discharge (ft ³ /s)	Spec. Cond. (μ s/cm)	Temp. (°C)	Chloride (mg/L)
1	16212950 Waikele Stream below H-1 Freeway at Waipahu	Lat 21° 23'39", long 158° 01'14" below H-1 Freeway, 100 ft upstream from cane haul road, 0.7 mi northwest of Waipahu Sugar Mill, and 0.7 mi upstream from gaging station 16213000.	1400 1210	05/19/04 07/02/04	7.01 8.3	110 104	24.5 26.5	12 13
2	16213000 Waikele Stream at Waipahu	Lat 21° 23'11", long 158° 00'49", on left bank 300 ft upstream from bridge on Highway 90, and 0.3 mi southwest of former sugar refinery at Waipahu.	0843 0835	05/18/04 07/02/04	30 26	387 405	22.0 23.5	70 77
3	212317158003701 Kapakahi Stream above Farrington Highway	Lat 21° 23'17", long 158° 00'37", upstream from two 4-ft concrete pipe culverts in parking lot of shopping center at Hanawai Circle at Waipahu, 500 ft upstream from Farrington Highway.	1115 1103	05/18/04 07/02/04	1.7 1.6	563 545	23.5 23.5	100 100
4	212332158001201 Waipahu Drainage Canal above Paiwa Street	Lat 21° 23' 32", long 158° 00'12", 1,500 ft upstream from Farrington Highway and 0.5 mi east of Waipahu Sugar Mill, upstream from Paiwa Street bridge.	1010 0952	05/18/04 07/02/04	2.8 2.7	580 561	25.0 24.5	110 110
5	212328157593601 Spring Outlet 2 West	Lat 21° 23'28", long 157° 59'36", a 5-8 ft concrete box culvert 0.4 mi west of Waiawa Spring	0845 0926	05/19/04 07/02/04	0.33 0.17	3990 4830	24.0 24.5	1200 1400
6	212330157592201 Spring Outlet 1 West	Lat 21° 23'30", long 157° 59'-22", a 12-in. concrete pipe culvert 1,000 ft west of Waiawa Spring outlet and 2,500 ft east of Waipahu High School. Drains from former watercress fields (now covered) to Pearl Harbor.	0956 1009	05/19/04 07/02/04	0.75 0.86	5060 5250	24.0 23.5	1600 1600

Map number (see figure 15)	Station number and name	Location	Measurement					
			Time	Date	Discharge (ft ³ /s)	Spec. (μ s/cm)	Temp. (°C)	Chloride (mg/L)
7	16214000 Pearl Harbor Springs at Waiawa near Pearl City	Lat 21° 23'36", long 157° 59'11", near Leeward Community College, 0.7 mi west of Pearl City, and 9.8 mi northwest of Honolulu, about 350 ft upstream from the mouth.	0838 0805	05/19/04 07/01/04	14 18	4000 4380	22.0 22.5	1200 1300
10	16215800 Waiawa Stream above Kamehameha Highway near Pearl City	Lat 21° 24'23", long 157° 59'10", 50 ft downstream from old cane haul road in Pearl City Industrial Park, 2,000 ft upstream from Kamehameha Highway, and 0.6 mi upstream from gaging station 16216000.	1103 1115	05/19/04 07/02/04	6.8 3.0	168 156	23.0 25.0	22 18
11	16216100 Waiawa Stream below H-1 near Pearl City	Lat 21° 23'44", long 157° 58'48", below H-1 Freeway, 1,200 ft downstream from gaging station 16216000, and 2,000 ft east of Leeward Community College.	1329 1135	05/19/04 07/02/04	12 7.7	425 518	25.5 25.0	81 110
12	212325157581801 Puukapu Site 3	Lat 21° 23'25", long 157° 58'18", at a 3- ft concrete pipe 1,000 ft west of Waimano flood channel at mouth. Drains from watercress fields to Pearl Harbor.	1020 0910	05/19/04 07/01/04	1.2 1.3	1450 1440	21.0 21.0	360 370
13	212325157581301 Puukapu Site 2	Lat 21° 23'25", long 157° 58'13", at two 4-ft concrete culverts on concrete roadway 100 ft north of old concrete gage house and 300 ft west of Waimano flood channel at mouth.	0925 0855	05/19/04 07/02/04	1.7 --	1700 1790	21.0 21.0	440 480
14	212326157580901 Puukapu Site 1	Lat 21° 23'26", long 157° 58'09", at two 3-ft concrete pipe culverts on right bank of Waimano flood channel at mouth. Drains from watercress fields to mouth of channel.	1033 0825	05/19/04 07/02/04	0.63 0.68	3170 3460	20.0 20.5	920 1000
15	16216550 Waimano Flood Channel below H-1 at Pearl City	Lat 21° 23'32", long 157° 58'08", 100 ft below Pearl Harbor bikeway, 600 ft from mouth, and 1,600 ft west of Hawaiian Electric Co. power plant at Waiau.	0832 1010	05/19/04 07/02/04	0.76 0.86	663 440	21.5 23.0	140 75

Map number (see figure 15)	Station number and name	Location	Measurement					
			Time	Date	Discharge (ft ³ /s)	Spec. (μ s/cm)	Temp. (°C)	Chloride (mg/L)
17	212333157580101 Kaluaopu Spring	Lat 21° 23'33", long 157° 58'01", at concrete bridge on bikeway, 700 ft west of No. 1 generator in the Hawaiian Electric Co. power plant. Measures the combined flow from the watercress fields and freeway storm drain.	0840 0833	05/18/04 07/01/04	7.5 7.7	945 1030	22.0 22.0	260 260
18	16219000 Hawaiian Electric Co. Tunnel at Waiau near Pearl City	Lat 21° 23'33", long 157° 57'55", concrete ditch at Hawaiian Electric Co. Waiau power plant, 20 ft downstream from tunnel portal, and 0.6 mi east of Pearl City.	1106 1018	05/19/04 07/01/04	2.5 2.8	1020 1020	20.5 20.5	240 250
19	212329157575001 Makai Spring at Hawaiian Electric Co. Power Plant	Lat 21° 23'29", long 157° 57'50", south of power plant at outlet of a 30-in. concrete pipe draining overflow from power plant and seepage from Old Rice Mill Spring into Pearl Harbor.	0940 0949	05/18/04 07/01/04	0.52 0.68	1120 1330	21.0 21.0	330 360
20	212331157574101 Waiau Spring below Kamehameha Highway	Lat 21° 23'31", long 157° 57'41", below Kamehameha Highway and 500 ft from outlet to Pearl Harbor. Drains from Waiau Springs.	1030 1058	05/18/04 07/01/04	1.9 2.0	323 356	21.5 22.0	59 61
22	16224000 Pearl Harbor Spring at Kalauao near Aiea	Lat 21° 23'06", long 157° 56'46", at Kamehameha Highway bridge, drains from Sumida watercress farm, 1.1 mi west of Aiea, and 7.6 mi northwest of Honolulu.	0934 0820	05/18/04 07/01/04	13 13	1740 1880	22.5 22.0	480 510
23	16224500 Kalauao Stream at Moanalua Road at Aiea	Lat 21° 23'07", long 157° 56'22", at Moanalua Road bridge, 0.4 mi northwest of Aiea Post Office, and 2.3 mi southeast of Pearl City Post Office.	1045 1020	05/18/04 07/01/04	1.5 2.6	344 228	24.0 24.0	77 35
24	16224550 Kalauao Stream above Kamehameha Highway at Aiea	Lat 21° 23'02", long 157° 56'35", above Kamehameha Highway and 1,300 ft from mouth, 1,000 ft downstream from gaging station 16224500, and 0.8 mi northwest of Aloha Stadium.	1045 0915	05/18/04 07/01/04	1.6 2.7	423 305	22.5 24.0	59 55